

# **ABSTRACT**

A metal halide lamp with red emission equivalent to or exceeding that of a blackbody source of equal correlated color temperature. A metal halide chemistry containing  $\text{CaI}_2$ , plus a complexing metal halide of  $\text{AlI}_3$  or  $\text{GaI}_3$ , is used to substantially increase red emission of a metal halide lamp. The inclusion of  $\text{TlI}$  in the fill chemistry is also important in influencing Ca to preferentially emit atomic and molecular red radiation of the visible spectrum while suppressing blue radiation. Optionally, a shroud of neodymium doped glass is also used to significantly filter transmission of yellow light, thereby further improving the proportion of red emission while maintaining a sufficiently white color and good general color rendering.